Congressional Testimony

"Polytrauma Center Care and the TBI Patient: How Seamless is the Transition between VA and DoD and Are Needs Being Met? "

Subcommittee on Health of the Committee on Veterans' Affairs

Chair
Rep. Michael Michaud

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Written Testimony

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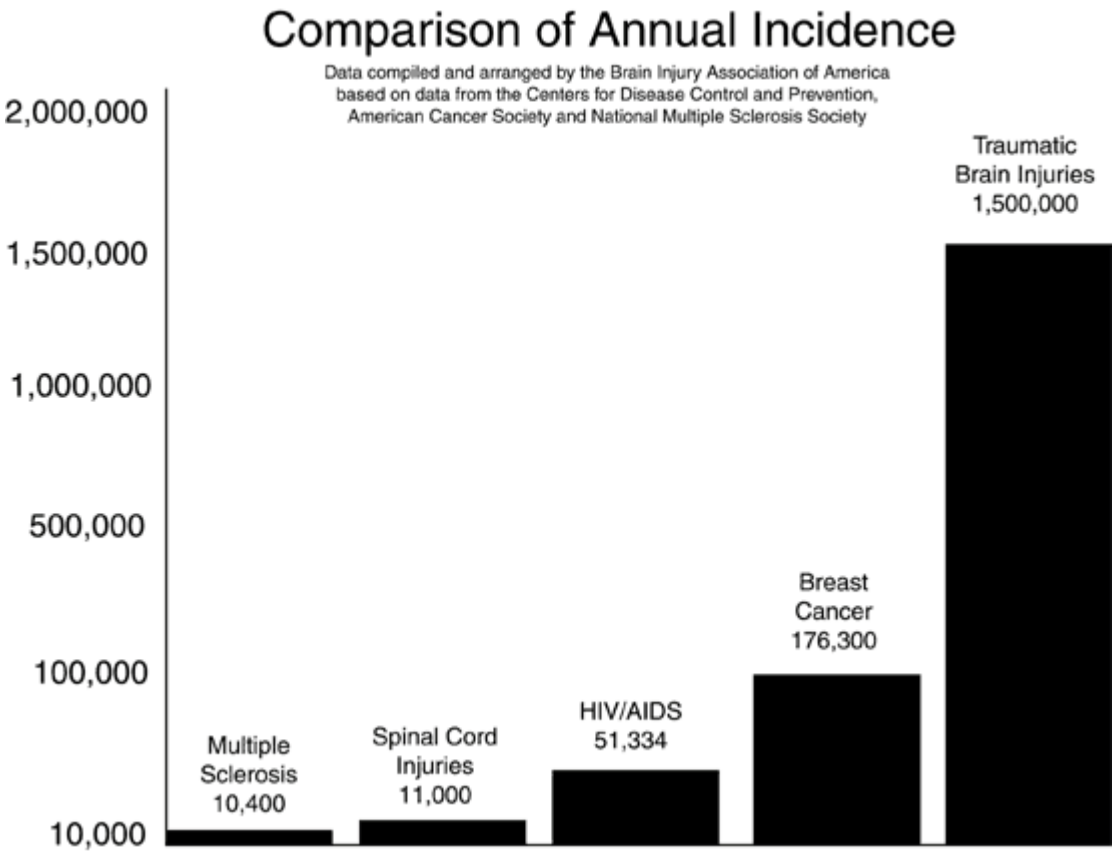
Representative Michaud, members and staffers of the Congressional Subcommittee on Health of the Committee on Veterans Affairs, thank you for allowing me the opportunity to participate in this briefing to discuss the care of veterans with brain injury. My name is Dr. Tina Trudel. I presently serve as President and Chief Operating Officer of Lakeview Healthcare Systems, a national provider of brain injury services from hospital to home. I also serve as Principal Investigator of the Defense and Veterans Brain Injury Center at Virginia Neurocare, a civilian brain injury rehabilitation site. I have been an advocate, researcher, professor and clinician in the field of brain injury rehabilitation for the past 20 years. This experience has heightened my awareness of the disconnection between our investment and advances in emergency management and acute care of brain trauma, versus the lack of resources available for post-acute treatment, community integrated rehabilitation and long term supports. Be it in the civilian or military community, there is a longstanding gap in meeting the long term needs of the growing population of brain injury survivors. It appears we have yet to accept that saving lives has consequences.

As others in the media have noted, brain injury is perhaps our greatest public health problem. It cuts across the age span, from infant to elderly, and affects our military both during war and peace time. Those with traumatic brain injury (TBI) are adversely impacted by the lack of funding and underdeveloped infrastructure in comparison to other diagnostic and disability groups. Not very long ago, individuals with brain injury often died, and until the National Head Injury Foundation (now Brain Injury Association of America) was founded by in the 1980's, there was no organized voice of advocacy and acknowledgement. While this recent era spawned improved survival and the brain injury movement, our national and state health and human services structures were already well-established. The funding train had left the station, and people with brain injuries were still waiting at the ticket counter.

Brain injury has become a leading public health problem for civilians and the military. In the United States civilian population, 1.4 million individuals sustain traumatic brain injury (TBI) annually resulting in 235,000 hospital admissions and 50,000 deaths (1). Additionally, 80,000 survive with residual long-term impairments. The Centers for Disease Control and Prevention estimate that long-term disability as a result of brain injuries (necessitating assistance with activities of daily living) affects 5.3 million Americans, with thousands of new individuals affected every year (2). This population continues to grow and age, creating greater challenges that must be met by an already burdened health and human services system. Economically, the total

impact of direct and indirect medical and other costs in 1995 dollars is reported to exceed $56 billion (3). Such costs do not include lost earning potential, family burden of care, special education, vocational retraining and a host of related issues as now are being recognized within the military. While blast injury and combat related TBI are presently in focus, it is important to remember that military service runs a risk of TBI even in peace time, with thousands of military personnel injured annually due to motor vehicle crashes, falls, training mishaps and other causes.



With regard to Operation Iraqi Freedom, the Office of the Surgeon General of the Army notes that 64% of wounded in action injuries have occurred as a result of blast from improvised explosive devices (IED), rocket propelled grenades, land mines and mortar/artillery shells (Defense and Veterans Brain Injury Center (DVBIC): Providing care for soldiers with traumatic brain injury. The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., 2006 http://www.hjf.org/research/featureDVBIC.html). Given the improvements in body armor, protective helmets and the resultant reductions in penetrating head trauma, blast closed head injuries have become the signature injury of these military operations.

Many individuals who sustain TBI in military and civilian settings are treated and return to active duty, productive work, social roles, family responsibilities and their pre-injury lifestyle. However, some TBI survivors live with residual disability, have unmet care needs, and/or are initially unsuccessful in re-entering home, vocational and community life. Those TBI survivors at risk for unsatisfactory outcomes or with continued rehabilitation needs, are candidates for community integrated rehabilitation (CIR), a broad term encompassing various approaches and contexts for post-acute treatment (through its relationship with Virginia NeuroCare, Lakeview operates the Defense and Veterans Brain Injury Center [DVBIC] CIR site in Charlottesville, VA, discussed in some detail below).

While this introduction may sound ominous, there are many bright lights of individual and programmatic success that demonstrate both the power of the human spirit, and the value of effective treatment, as elucidated by a growing body of peer-reviewed scientific research (4, 5, 6, 7, 8, 9). A 2005 Cochrane review of multi-disciplinary rehabilitation for acquired brain injury in adults of working age examining all relevant studies meeting methodological criteria published since 1966 stated the following(6):

- For individuals with moderate to severe brain injury, there is 'strong evidence' of benefit from formal intervention.
- For individuals with moderate to severe brain injury who are already in rehabilitation, there is 'strong evidence' that more intensive programs are associated with earlier functional gains.

Reporting findings generally consistent with the later Cochrane review, Douglas Gentleman noted in a 2001 article that, "Clinical and political responses to the worldwide epidemic of traumatic brain injury need to recognize that the quality of outcome depends on both phases of treatment: acute care and rehabilitation(7)." Additionally, current research further demonstrates the relationships among provision of rehabilitation therapies, increased functioning, improved test scores and even changes in brain activity on fMRI, as well as the improved rate of recovery and functional independence from more intensive therapies (8, 9).

COMMUNITY INTEGRATED REHABILITATION

Community integrated rehabilitation (CIR) is also referred to as post-acute brain injury rehabilitation and generally includes a number of approaches that allow for individuals with TBI to benefit from further rehabilitation after medical stability is established and initial acute (in-hospital) rehabilitation is completed. The most common delineation of CIR programs is highlighted in Table 1. CIR programs are notably lacking in the VA system.

Neurobehavioral CIR programs have historically focused on treatment of mood, behavior and executive function, while ensuring supervision and safety in a residential, non-hospital setting. Such programs focus on psychosocial outcomes with emphasis on application of behavioral principles and development of functional skills. Neurobehavioral CIR programs typically have inter- or transdisciplinary treatment teams, utilize direct support personnel as therapeutic extenders, and are often led by neuropsychologists or behavior analysts.

Residential CIR programs were initially developed to meet the needs of individuals who required extended comprehensive TBI rehabilitation, 24-hour supervision, or did not have access to adequate outpatient/day services. The home-like environment and staff support served to facilitate development of skills needed to negotiate everyday life easing generalization across community environments.

Comprehensive holistic day treatment CIR programs provide a milieu-oriented, multimodal approach, often with a neuropsychological focus. Interventions target awareness, cognitive functions, social skills and vocational preparation through individual, group and family-involved interventions delivered through an interdisciplinary or transdisciplinary team in clinic and community settings. These programs are among the most researched in the entire field of CIR, and while treatment guidelines are often site specific, such resources are invaluable, allowing discourse, analysis and dissemination of techniques.

Home-based CIR involves a highly variable degree of services and supports for the individual with TBI able to reside in a home environment. Typically, such individuals do not require 24-hour supports or supervision. Home-based CIR may include the spectrum of outpatient services commonly accessed through individual treatment providers or clinics, or minimal professional supports. There is usually no identified 'treatment team', although collaboration across a number of health and social service systems may be evident. Behavioral approaches using self-

monitoring and cueing may be employed, as well as models wherein family members or in-home paraprofessionals are engaged as therapeutic change agents. Additionally, Home-based CIR involves participant education and the growing use of telephonic, web-based, and technological aides. Home-based programs may be supported by or serve as a transition from, other CIR treatment settings.

Table 1.
COMMUNITY INTEGRATED REHABILITATION MODELS

Model	Participant Characteristics	Description
Neurobehavioral Program	Significant behavioral challenges Require 24 hour supervision	Residential setting Intensive behavioral treatment
Residential Community Program	Cannot participate as outpatients Require 24-hour supervision or available support	Residential setting with community focus Integrated comprehensive treatment
Comprehensive Holistic Treatment	Need for intensive services Benefit from improved awareness, practice and compensation	Day program model Integrated, multimodal rehabilitation
Home-based Program	Able to reside at home Able to self-direct care	Education and advisement Telephonic and web-based support and services Home-based therapeutic activity Availability of outpatient supplemental services
Trudel, Nidiffer & Barth, in press		Highly variable

Support for the effectiveness of community integrated rehabilitation (CIR) post-TBI has gradually been established, with limitations in research due to low level funding and the challenges inherent to studying a diverse, individualized treatment approach. Findings include (10,11,12,13,14,15, 16,17):

- CIR increases societal participation, community and home skills, independence, productivity and improved functional outcome on activity measures.
- CIR related improvement is demonstrated in samples of participants who range from months to years post-injury.
- CIR appears to produce gains that are maintained over time.
- CIR improves self and family ratings on a variety of measures and on tests of neuropsychological functions.
- Comprehensive holistic/day treatment CIR has the strongest research foundation for effectiveness, including randomized control trials.
- CIR demonstrates some benefit across the continuum, but appears most to provide most benefit for those with moderate and severe TBI.
- Individuals with severe TBI demonstrate greater functional improvement from a residential program model versus home-based rehabilitation.
- CIR reduces neurobehavioral problems, and therefore risk for institutionalization, criminal justice contact and danger to self or others.

LAKEVIEW'S NEUROBEHAVIORAL AND CIR SYSTEM

Lakeview's treatment sites (14 programs across 5 states) serve individuals from hospital to home. The primary focus for post-acute TBI care includes our residential and community integrated programs. These specialized neurobehavioral and CIR programs serve those individuals who require treatment, supervision and support related to their significant cognitive and/or behavioral challenges. Physical disability issues are also addressed. The emphases of the program include cognitive remediation, functional skill acquisition, self-care, positive approaches to behavioral self-management, informed pharmacology, individualized treatment plan development and implementation, community integration and family education/support. The programs predominantly focus on the care of adults with neurobehavioral diagnoses (typically brain injury related) who have not succeeded as outpatients or with in-home supports.

The Lakeview programs are founded in a person-centered, inclusionary model, encouraging the active participation of participants and their families in all aspects of treatment development, implementation and discharge planning. Program interventions are designed to facilitate re-integration through enhancement of life skills, compensatory strategies, self-esteem and self-control throughout the therapeutic milieu. The program is supported by the management and clinical expertise of Lakeview's national and regional resources. The NeuroBehavioral Program serves individuals with significant behavioral challenges in need of greater supervision, support and treatment with a focus on safety and functional skill development. The Community Integrated Rehabilitation Program serves those individuals, who while still in need of 24 hour support and supervision, pose less risk to self or others and typically have less intense active treatment needs. It is anticipated that program participants will be a blend of individuals receiving brief treatment interventions and those in need of longer term strategies and supports to insure quality of life in the least restrictive environment.

All treatment provided at Lakeview is initiated based on clinical recommendations following an assessment period, with agreement from the program participant, guardian and funder. Treatment meets the standards of each respective licensed profession, with goals and objectives established by the program participant in concert with the clinical team, through an individualized service plan that is transdisciplinary and person-centered. Competent, supervised providers (including extenders, such as life coaches, aides and other direct support staff), in accordance with the highest ethical principles including informed consent regarding the procedures, risks, potential benefits and possible side effects of all treatments, deliver services across various environments and activities. Discharge planning begins at the time of admission in order to target treatment and maximize likelihood of successful skill generalization. The participant, family and treatment team, including external parties, discuss treatment goals, possible discharge placements, and length of stay considerations. Lakeview's policy is to provide a comprehensive discharge manual to the individual served at time of discharge. Ongoing discharge planning is coordinated by the Case Manager. It is recognized that some individuals will be in need of longer term resources, including life care plans and arrangements for community-based supported living with family, other agencies or through the program.

THE DVBIC CIR PROGRAM AT VIRGINIA NEUROCARE

As previously noted, numerous research studies support the general benefit of CIR following brain injury, especially for those with more severe injuries. Questions remain as to the nature, scope, timing, intensity and duration of CIR in relation to cost and outcome, as well as the application of new technology and adaptive devices to the CIR process. Progress in developing an evidence base for CIR has been hampered by the diversity of approaches and lack of systematic, detailed descriptions of actual treatment activities. This lack of defined treatment limits options for replication, randomized control trials, case series or multi-center studies. The task of standardization of treatment for such an individualized treatment approach as brain injury rehabilitation may initially seem onerous. However, similar processes have successfully lead to

extensive research and dissemination of effective treatment in an equally complex and individualized arena, cognitive behavior therapy (CBT).

The valuable clinical research characteristics identified early in DVBIC's history (homogeneity, available records, infrastructure, multi-site, outcomes measurement, tracking) provide an optimal foundation for CIR research through Virginia NeuroCare, a DVBIC core civilian partner program with a long history of CIR focus and expertise, operated through resources provided by Lakeview, a national leader in brain injury rehabilitation. The program's dual focus includes providing optimal treatment of service men and women with TBI, while also advancing brain injury rehabilitation through treatment research and applied technology in community integrated settings. Research and applied technology developed through DVBIC program such as VANC can be rapidly disseminated and replicated in other community settings, as well as to improve care in the civilian population. The DVBIC program at Virginia NeuroCare, through its relationship with Lakeview, is presently engaged in a research program on the Development and Implementation of Brain Injury Community Integrated Rehabilitation (CIR) Treatment Manual for Military Personnel.

The DVBIC at Virginia NeuroCare's Neurobehavioral CIR Clinical Research Project is presently developing, implementing and analyzing educational and treatment interventions with program participants from the military who have suffered mild, moderate, and severe TBI primarily from combat IED blast forces and motor vehicle accidents. The CBT treatment manual approach is being applied to brain injury rehabilitation. CBT manualized treatment has been implemented to facilitate research and therapy technique dissemination for many behavioral and medical conditions including: 1) anxiety and mood disorders, anger management, domestic violence, substance abuse to treatment and vocational training; 2) medically complicated problems such as erectile dysfunction, obesity, eating disorders, diabetes management, chronic fatigue and chronic pain; and 3) CBT treatment manuals have even been targeted to specific treatment populations including prisoners, low income and minority groups and persons with developmental disabilities. Thus, the treatment manual model holds significant potential to advance clinical research in brain injury rehabilitation, as the approach has both the structure and flexibility to address the comprehensive nature of brain injury CIR. The treatment manual model also provides for ready dissemination, replication and application of successful clinical practices to improve outcomes across broad systems.

The military program participants we serve are typically several months post injury and have made substantial recovery, yet still experience mild to moderate neurobehavioral deficits typically associated with frontal and temporal lobe dysfunction and executive dyscontrol. These soldiers are still in the active stages of recovery and no longer require acute medical intervention, but they may present balance problems, ataxia, coordination impairment, impaired activities of daily living functions, memory difficulties, attentional problems, fatigue, problematic initiation and motivation, irritability, frustration, depression, sleep disturbance, poor judgment, impulsiveness, anosognosia, organizational problems, speech difficulties, poor anger control and socialization skills, general cognitive dysfunction, and family or work stress.

We are formalizing a 12-week pilot day program to address most of these issues through education, functional therapeutic interventions, applied technology, cognitive-behavioral treatment procedures, group therapy and discussions, and individual treatment. The program is divided into 12 independent educational and group interaction modules followed by individual and group therapy sessions and functional implementation using compensatory strategies and devices. Each of the 12 modules will be based on a detailed manual in order to facilitate replication, research, multi-center work, treatment component analyses and eventual dissemination as indicated across the DVBIC, military and veteran's system and civilian rehabilitation community at-large. Initial module development has been based on a review of the scientific literature, clinical judgment and expertise, and program participant feedback and outcomes. These educational and group sessions modules include:

- Introduction: Exploring the Problems and Initial Evaluations

- Wellness: Stress, Fatigue, Pain Management, and Relaxation
- Wellness: Coordination, Flexibility, Exercise, Nutrition, and Sleep
- Focusing Attention
- Time Management
- Memory: How to Compensate
- Maximizing Memory in Functional Environments
- Organizing Daily Life and Daily Living Skills
- Problem Solving, Awareness, Judgment, Safety, and Impulsivity
- Social Interaction: Cognitive and Emotional Changes (depression, anxiety, irritability, and anger management)
- Social Interaction: Assertiveness/Picking Up The Pieces
- Review and Synthesis

The manualized CIR treatment modules are practiced and enhanced within the context of real life volunteerism, clubhouse membership, supported work experiences, transportation skill development, community navigation, and laundry, shopping, budgeting, banking and meal preparation within the broad context of community re-entry. The program focus includes supplementation with adaptive technology, as well as formal evaluation of the acceptability of technological aides by the user, as the quality of the rehabilitation technology – user interface is a key predictor for success. The definitions and descriptions of this enriched environment, therapeutic milieu and staff training expectations will also be articulated in the relevant module treatment manual. All program content will be structured, documented and developed into a manual format to facilitate clinical research and staff training.

Pre and post program assessments using behavioral and functional measures, as well as levels of vocational success and independent living skills are being used. Additionally active duty military members are tracked for rates of return to active duty and medical board decisions through discharge planning processes. Post discharge follow-up data including residential and occupational outcomes, and participant feedback, will also be solicited and analyzed in order to further refine the model, treatment manuals, and staff training tools. By tracking effective approaches to treating servicemen and women who have experienced brain injuries in the course of their duties, we hope the DVBIC program at Virginia NeuroCare will be the leader in delineating effective, efficient strategies that can be utilized in other CIR programs, both military and civilian.

ASSISTIVE TECHNOLOGY IN TBI REHABILITATION

CIR environments also provide the best opportunity to implement technological aides in therapy environments. Low tech cognitive supports such as memory journal, dry erase boards and checklists have long been used in TBI rehabilitation. Presently there are a plethora of new technological devices and applications. A primary focus for assistive technology intervention with individuals post-TBI is to ensure the match of technology and user, and involvement of skilled clinicians is paramount. Approaches include both person oriented and environmentally oriented applications. Current tools are best for memory storage, task execution or scheduling and sequencing. There has been some success with customized PDAs and memory compensation, voice organizers and audible reminders, mobile phone and pager cueing systems, datalink watches and adapted task-oriented programs for scheduling, bill paying and similar functions. Telephonic interventions, videoconferencing for individual and family intervention, web-based resources for treatment and training and self-help modules have also been implemented with some success (18, 19, 20, 21).

Presently the Defense and Veterans Brain Injury Center (DVBIC) at Virginia Neurocare is part of two grants under review: 1) driver evaluation and rehabilitation utilizing an advanced driving simulation module; and 2) adaptation of a web-based educational and self-help module for the assessment and treatment of sleep disorders (common post-TBI). Additionally, through the DVBIC contract, we are advancing portable and wireless devices to support participation in home and community activities, including GPS, specifically through the VANC Pilot Project on the

Efficacy of Using Personal Global Positioning System (GPS) Technology and Personal Data Assistants (PDAs)/Mobile Phones.

As service men and women with TBI progress through the recovery process, they frequently experience some level of confusion and disorientation with regard to time, place, and direction. Even when this confusion lifts, following directions in navigating the community can be difficult and often requires supervision and maximum use of staff resources, particularly when trying to track multiple individuals who must practice and progress through the successful negotiation of many community based tasks. In worst case scenarios, those who do not develop community navigation skills are at risk of social isolation, unemployment and the need for long term supervision and supports, often placing excessive burden on care systems or family members. We will be using available Global Positioning System wrist watch styled devices and/or PDA/mobile phone integrated GPS to track patients who are beginning to be independent in community walking privileges. Use of the GPS frees patients from the need for in-person supervision by using the internet to pinpoint where the patient is in the community. Patients are given the opportunity for increased practice and functional independence. The technology utilized and skills developed have the potential to dramatically decrease the burden of care, economic cost and facilitate the greater development of the patient's potential in home, work and community roles. It is hoped that this technology will speed progress in community integrated rehabilitation, reduce rehabilitation length of stay and facilitate safe transition into the home community. This pilot study will evaluate the efficacy of this technology-based system for tracking and training these patients, as well as provide a mechanism for in vivo coaching of persons who become disoriented. As with other technological aides used within the program, various GPS systems will be evaluated for their adaptive technology-user interface. This case series of GPS users will provide the foundation for descriptive articles to advance the field and promote additional research and development.

NEROBEHAVIORAL AND CIR CHALLENGES WITHIN THE VA SYSTEM

Neurobehavioral treatment and CIR after TBI are a particular challenge within the VA system. Individuals needing extended care following moderate and especially severe TBI require a therapeutic approach that allows for gradual, extended treatment and the possibility of long term supports. Additionally, this treatment is not provided in a medical model, but instead targets cognitive functions, psychosocial elements, life skills and social/vocational roles. Neuro-behavioral and CIR programs rely minimally on physicians and heavily on allied health, behavioral health, direct support staff extenders and life coaches. These programs are typically support staff intensive and require extensive personnel training at all levels. Private neurobehavioral programs and CIR are available across the country in an inconsistent manner, as presently such services are not usually funded through mechanisms of Tricare, Medicare or typical Medicaid, although many states have instituted Medicaid waiver programs to address these needs within the civilian population. Rather than reinventing the wheel to access the civilian system, the VA would be wise to consider care coordination through facilitation of existing systems such as the Brain Injury Association of America and its national and state information and referral resources and the National Association of State Head Injury Administrators, both non-profit organizations with strong networks and the foundation knowledge of brain injury services across the country.

A problem faced by all neurobehavioral and CIR programs involves the national shortage of key providers such as occupational therapists, physical therapists, speech-language pathologists, applied behavior analysts and neuropsychologists familiar with brain injury rehabilitation, especially in the post-acute phase and community environments. These allied health provider shortages are increasing as supply/demand is pressured due to an aging population, increased injury and chronic illness survival rates, a growing disabled population in the United States, and special education utilization for youth with developmental disabilities. Further, professions are limiting the number of graduates considering entering the field by increasing academic requirements to enter the field (speech-language pathology and applied behavior analysis remain at the master's level; rehabilitation psychology and neuropsychology remain at the doctoral level with post-doctoral training; occupational therapy is increasing from bachelor's to master's level;

and physical therapy is increasing from master's level to doctoral level in many regions). The private and public sector TBI rehabilitation providers are increasing salary rates, providing sign-on and retention bonuses and are competing with lucrative private practice opportunities in many states. The VA system is in a difficult position to recruit and retain in this competitive environment with existing qualified labor shortages and rising demand.

Another issue that impacts the VA is that of the population concentration of veterans needing neurobehavioral or CIR services in a particular area. Given population needs, the VA would need to recruit, retain, train and implement effective teams as a regional endeavor, as this is not pragmatic to do locally. Additionally it takes time, leadership and expertise to develop an effective team in order to meet the complex needs of individuals with more severe TBI and neurobehavioral impairments, as well as to provide CIR. Optimal services are as close to home, community and family as possible for engagement, training and discharge planning. Thus, it has been and remains pragmatic in many instances and regions, to contract with local civilian resources, and a number of private sector organizations that provide neurobehavioral, CIR and supported living services to veterans. Issues of concern with civilian resources include inconsistencies in service quality, lack of familiarity with military issues, risk of overpricing if reimbursement is not standardized/managed and also the lack of any resources in some regions. There is significant opportunity of blending resources to include regional VA based services in more populous regions, private contractor services where available and to encourage consultation with experienced civilian providers to facilitate and expedite VA development to ensure a continuum of neurobehavioral and CIR services.

Key elements of effective neurobehavioral treatment and CIR vary in terms of 'fit' in military and VA healthcare environments. Elements of treatment that are more readily amenable to adaptation in VA and military settings include:

- development and implementation of schedules
- establishment of routines
- breaking down more difficult activities into component tasks for teaching and training
- some environmental manipulations to foster success
- introduction of compensatory devices and assistive technology

Elements of effective neurobehavioral treatment and CIR that are difficult to adapt and implement in military and VA healthcare settings include:

- life coach and functional skill development models
- environmental enrichment models
- community exposure for repeated practice (individuals with TBI often have difficulty generalizing technology learned in institutional/medical settings)
- frequent distributed brief sessions rather than longer therapy appointments
- flexibility to work with natural cycles of alertness, arousal and fatigue
- sleep monitoring and behavioral data collection (requires technician/aide staffing levels)
- individualized learning strategies support by direct care staff and focused on errorless learning approaches and chaining procedures
- teaching of mental rehearsal, self-talk and self-monitoring strategies in small group, then real-life scenarios
- application of compensatory devices and assistive technology in real-life settings
- long term supported living within the community

Lastly, the scope and complexity of TBI in the military and need for a centralized resource was recognized when the DVBIC was established over 15 years ago. Enhancement of DVBIC's role as the primary coordinator and facilitator of research, clinical and education development across the military Department of Defense and VA systems is critical. Without unified data management and coordinated resource facilitation across all branches of the military and VA sites, opportunities for research advances in TBI rehabilitation, system improvement, development/dissemination of best practices and optimal service delivery to our men and women in uniform are lost, along with opportunities for translating these advances to civilians with TBI.

DISCUSSION

Post-acute care for individuals with traumatic brain injury has lagged behind virtually all other treatment and support services in both civilian and military realms due to the low funding resources, later/lack of identification of this group of trauma survivors, and apparent difficulty in securing and sustaining a focus on this complex, growing problem. The current increased national attention provides an opportunity to foster collaborative efforts across private, public and military systems to improve brain injury services for all Americans, especially our veterans. Pragmatic issues and effective, efficient use of resources supports the need for a well-managed blend of VA and civilian sector services in order to maximize successful return to home, family, employment and community life for our veterans with brain injury.

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